



Superflow & Superflow 350 Regulator





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Superflow & Superflow 350 Regulator



- Regulator systems on all KM helmets are simple and highly reliable
- Superflow regulator is the most popular helmet regulator
- Design is over 40 years old and still outperforms newer designs





Superflow & Superflow 350 Regulator



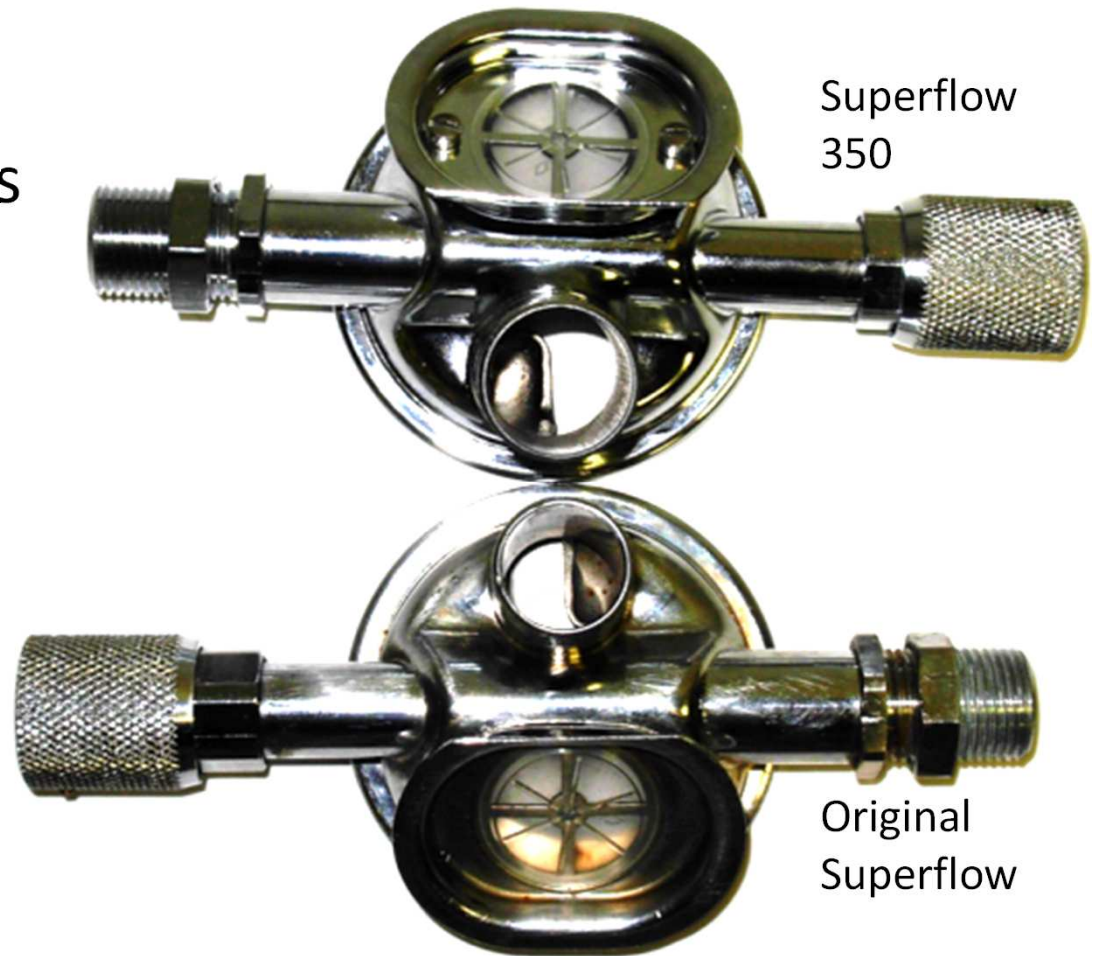
- Regulator must receive regular maintenance to assure the best performance possible
- Breathing resistance will increase if demand regulator is not maintained or adjusted properly
- If regulator is damaged, there is always a backup supply of steady flow gas available from the defogger valve



Superflow & Superflow 350 Regulator



- Two different surperflow regulators
- Original Superflow
- New Superflow 350
- Both look the same

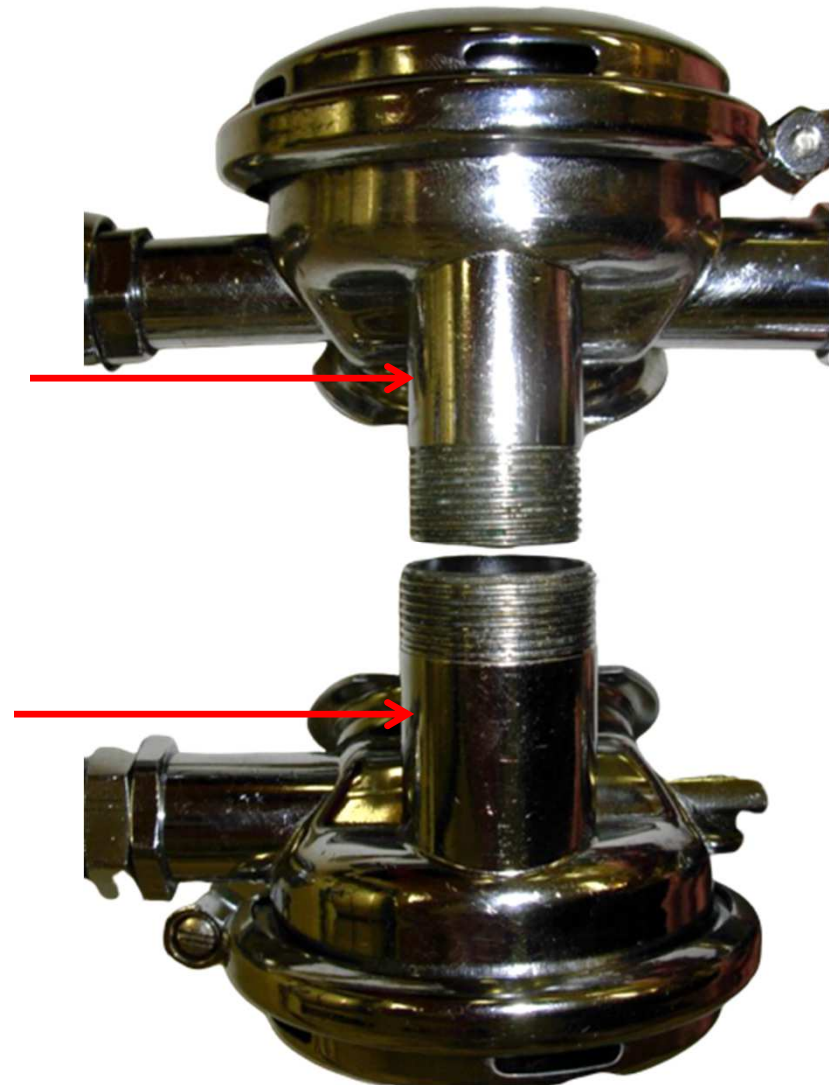




Superflow & Superflow 350 Regulator



- Superflow, small bore $\frac{3}{4}$ " is used on the SL-17 A/B, and older KMB-18/28 Band Masks
- Superflow 350, big bore is used on the SL-17K, 17C, 27, KM37, and newer KMB 18/28 Band Masks





Superflow & Superflow 350 Regulator



- Differences in the standard Small Bore Demand Regulator Body and the Big Bore

Original Superflow



Superflow 350



Superflow & Superflow 350 Regulator



Superflow (original)

17A, B, C (older Band Mask 18/28)

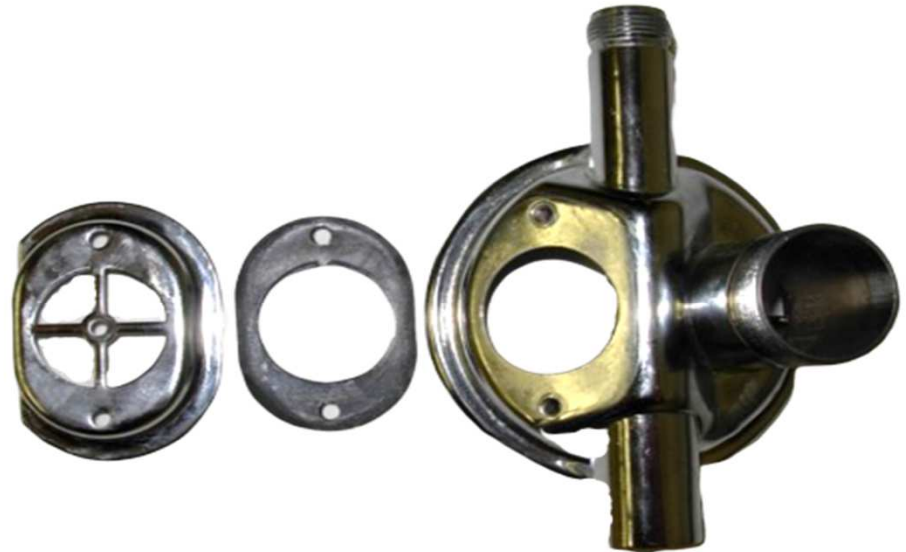
- Extra Spring & Brass washer on inlet side
- Whisker flange soldered on



Superflow 350

SL 27, KM 37, Newer KMB 18/28
Band Mask
(17C After 2005)

- Removable whisker flange

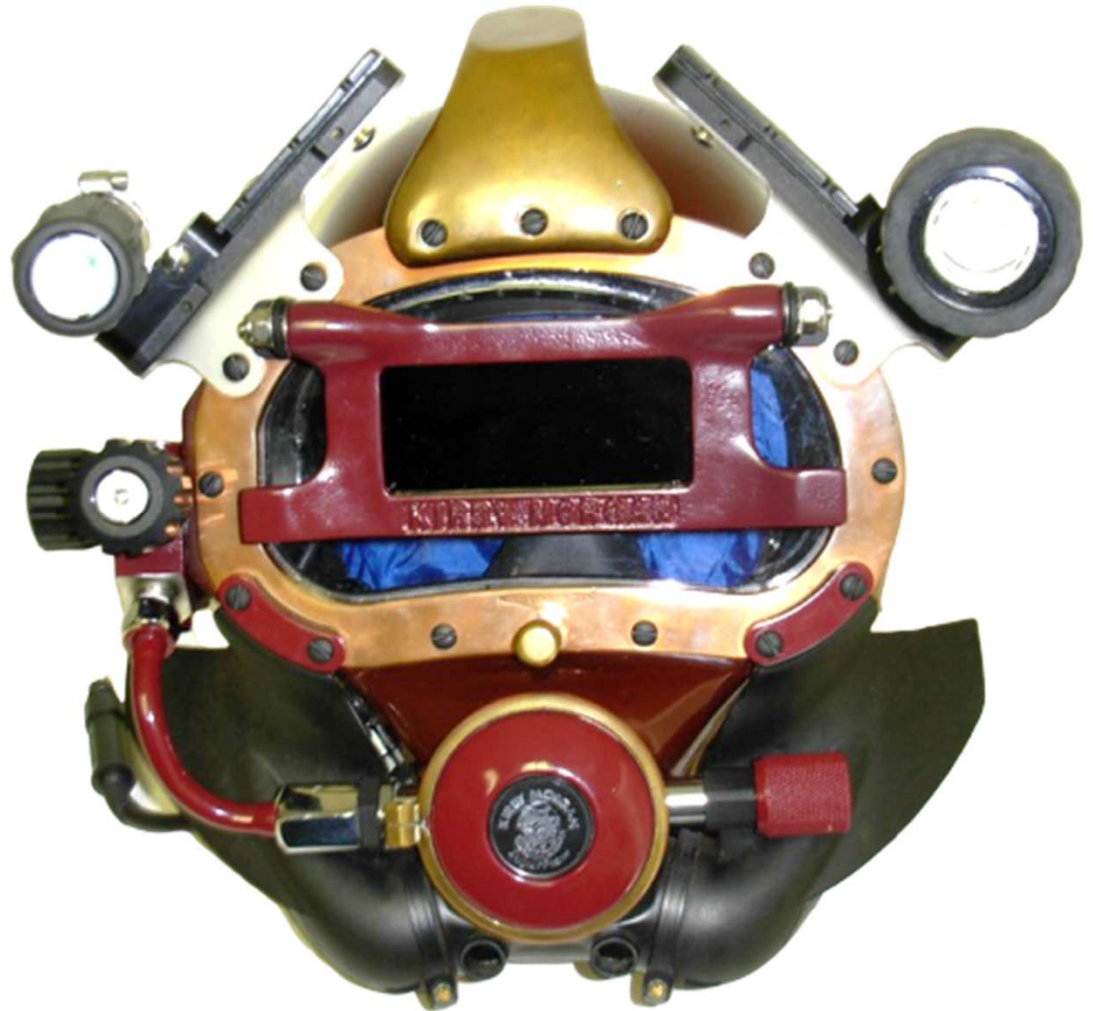




Superflow & Superflow 350 Regulator



- Tri/quad valve fit both
- New whisker Wings fit both





Superflow & Superflow 350 Regulator



- Adjustments are the same for both
- Internal parts are the same (except for the extra spring & Brass washer, original Superflow)
- Very little difference in performance



Regulator Diaphragm & Cover



- Remove regulator clamp by removing the clamp screw, remove cover and diaphragm
- Clean diaphragm with a proper solution and wipe dry
- Check for a good bond between the metal disc and the silicone, Replace diaphragm if any doubt exists





Superflow & Superflow 350 Regulator



- Carefully inspect the Diaphragm for cuts, tears, and deterioration
- If any damage is found, replace the Diaphragm
- Pull and stretch diaphragm





Superflow & Superflow 350 Regulator



- Proper cleaning, inspection, and need for sterilization between different divers
- The use of a different Diaphragm can cause interference with the Roller Lever and affect Regulator adjustment and performance



Regulator Cover



- Regulator cover should not have excessive dents or deterioration
- Minor dents & scratches are acceptable

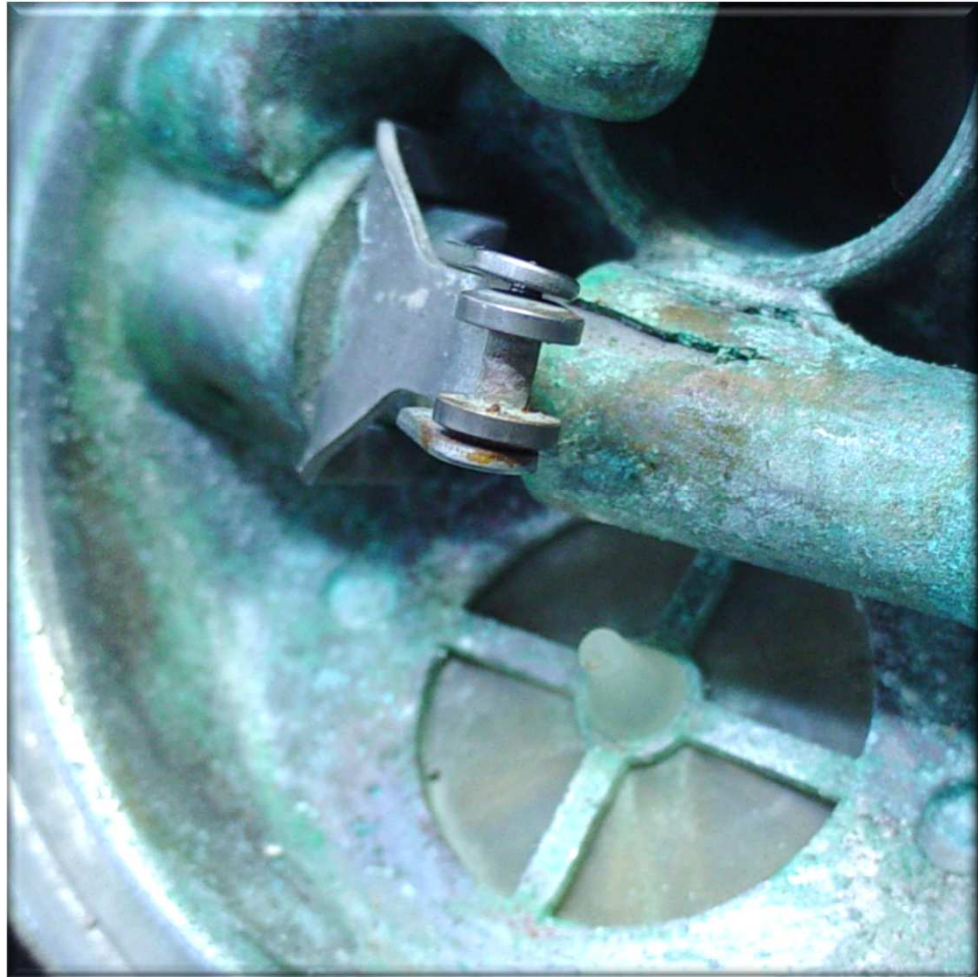




Superflow & Superflow 350 Regulator



- Carefully check the Regulator Exhaust Valve for warping, distortion, stiffness and any signs of damage





Superflow & Superflow 350 Regulator



- Poke at the Flapper Valve from inside the Regulator to check for stiffness of the Valve
- Flapper valve should be clear and flexible





Superflow & Superflow 350 Regulator



- Check the Regulator Body for corrosion and contamination

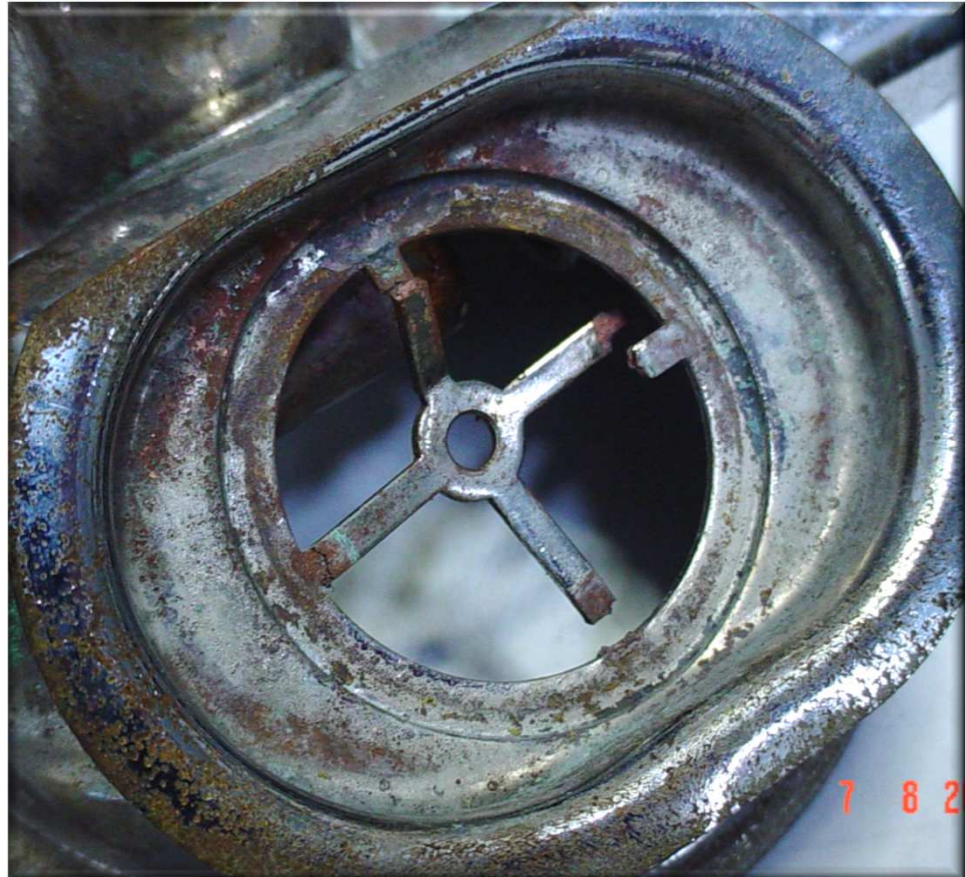




Superflow & Superflow 350 Regulator

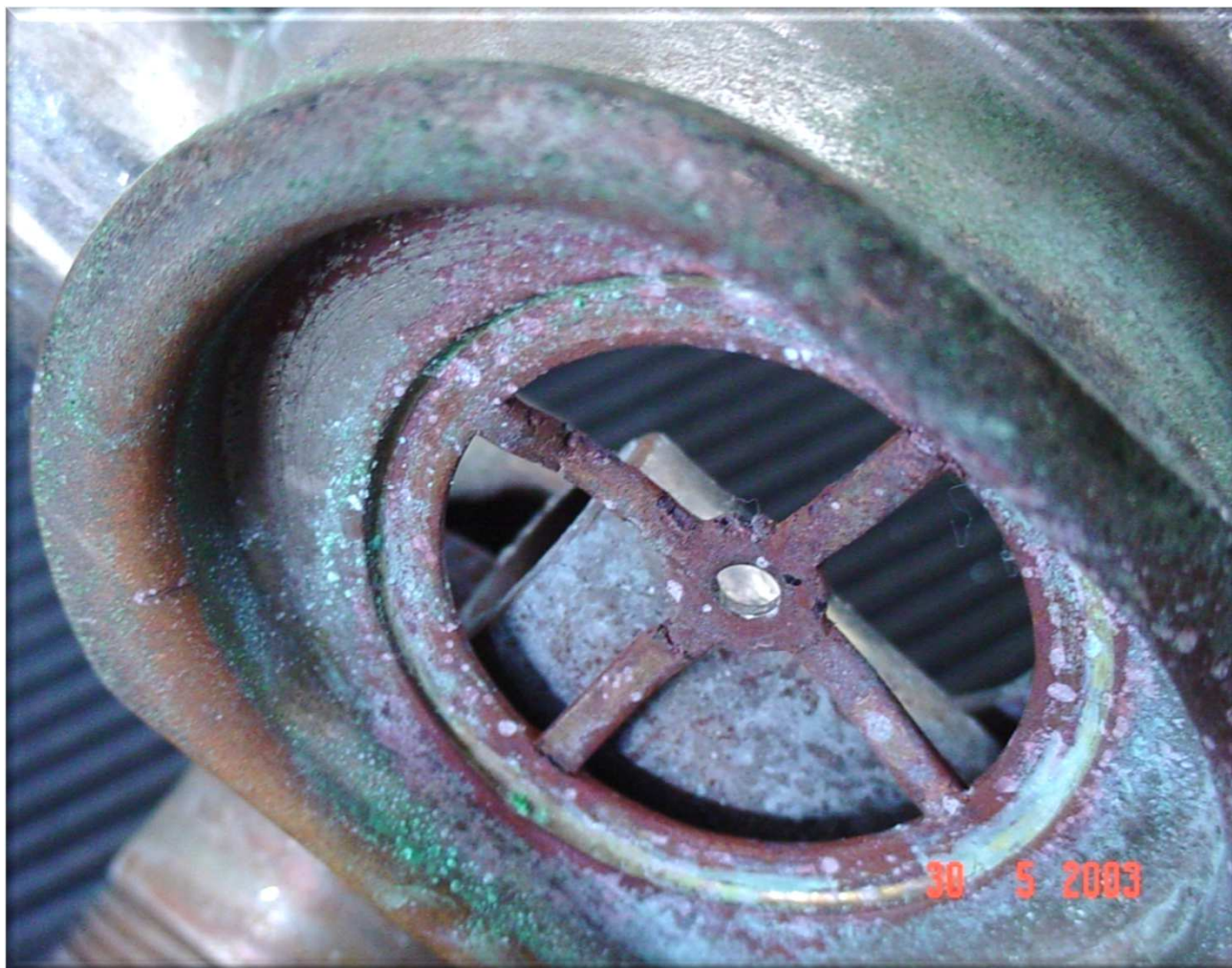


- Check for bent Valve Seat Spokes
- The Spokes should not be bent or deformed
- Guidance O & M Manual





Superflow & Superflow 350 Regulator





Superflow & Superflow 350 Regulator



- Keep the seating surface free of contaminants and do not lubricate valve

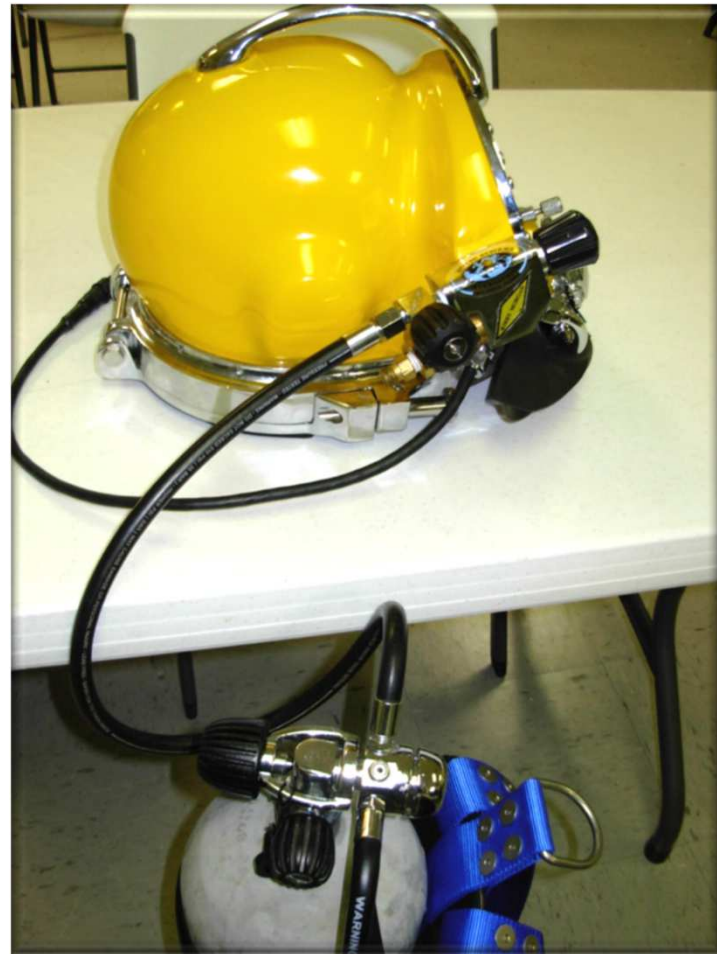




Superflow & Superflow 350 Regulator



- Attach a breathing quality air source to the Umbilical Adapter or EGS valve and set the supply pressure to between 135-150 psig (9.31-10.34 bar)





Superflow & Superflow 350 Regulator



Special Tools

- Inlet valve holder (#525616)
- Regulator adjustment wrench (#525-611)
- Socket wrench (#525-612)
- Castle wrench (#525-618)
- Regulator mount socket (#525-625)

SuperFlow / SuperFlow 350 Regulator Tool Kit #525-620





Superflow & Superflow 350 Adjustments



- Screw Bias adjustment knob (clockwise) all the way in
- Pressurize regulator to between 135-150 p.s.i.g. of supply pressure
- Screw Bias adjustment knob out (counterclockwise) until the regulator starts to free flow, then screw the adjustment knob in (clockwise) until the free-flow just stops
- Depress the lever several times to ensure the free-flow has stopped



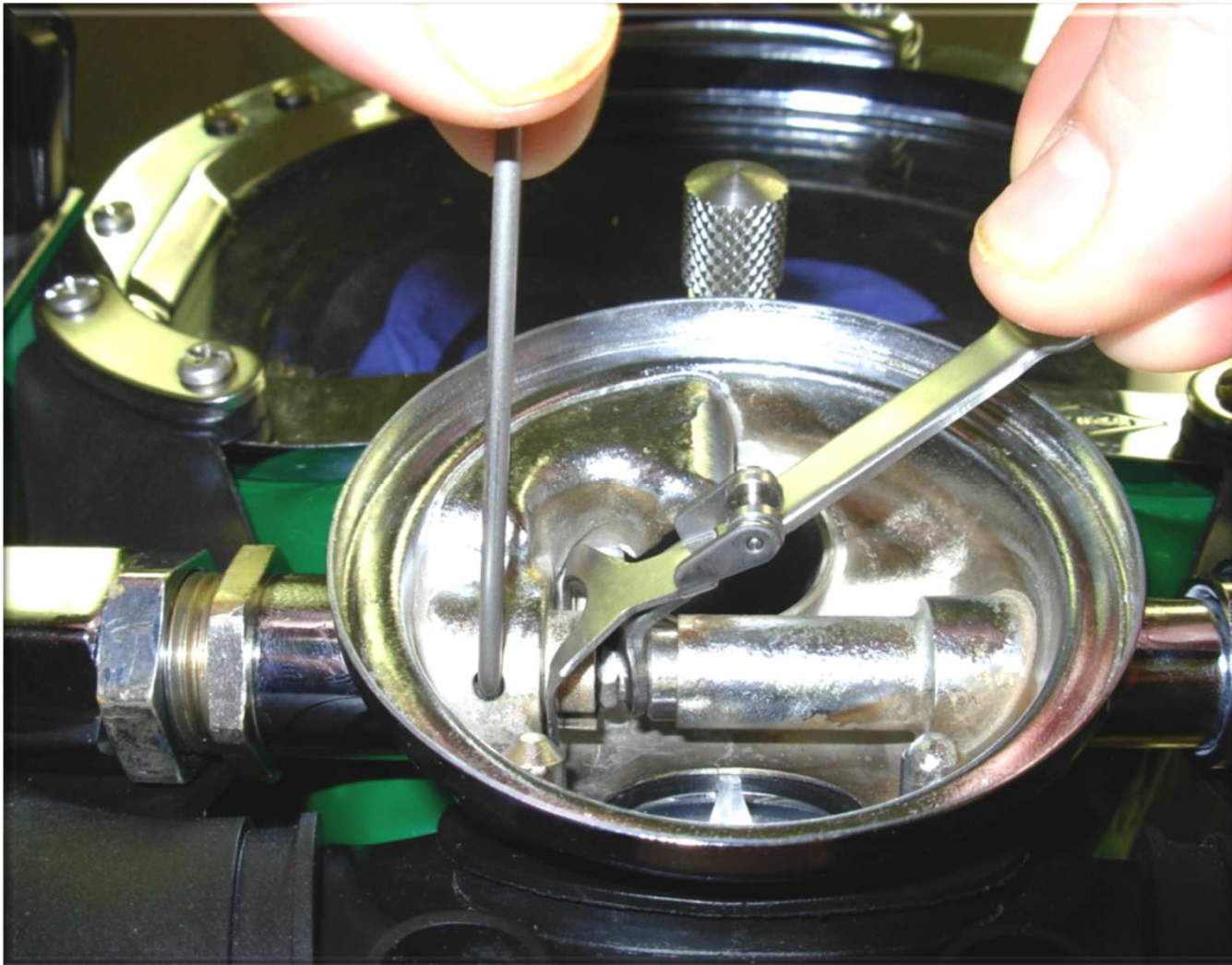
Superflow & Superflow 350 Adjustments



- If the free flow does not stop, the adjustment nut is too tight
- If the roller lever is sloppy (loose) the adjustment nut is too loose
- Insert inlet valve holding tool into balance hole on inlet tube. Push forward on the tool to stop the inlet valve stem from turning
- Adjust the nut until there is 1/16 inch (1.5 mm) to 1/8 inch (3.0 mm) of free play at the end of the lever



Superflow & Superflow 350 Adjustments

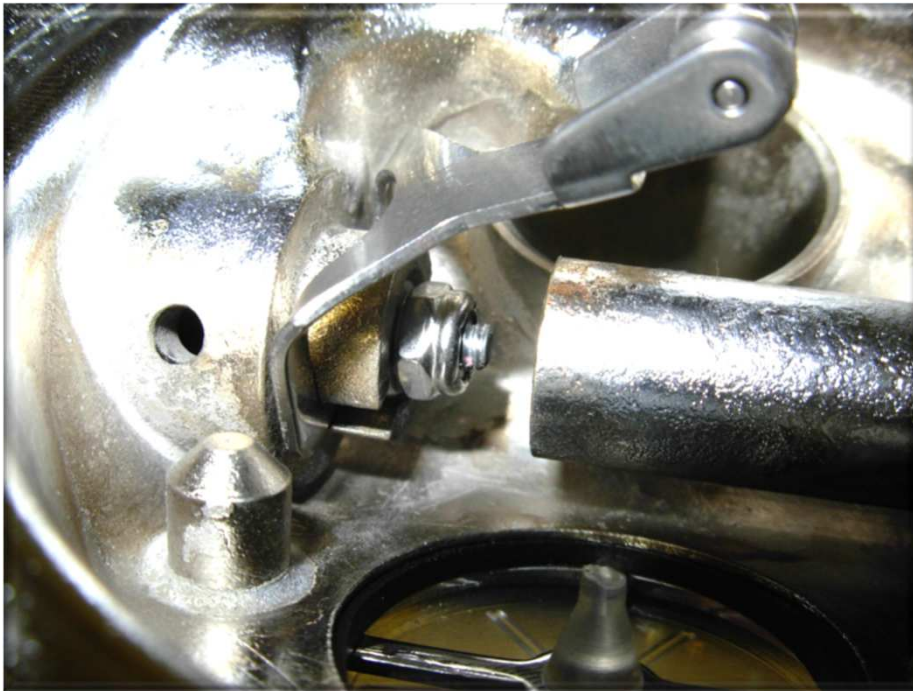




Superflow & Superflow 350 Adjustments



1/16 to 1/8 in. of play in roller lever



Correct Height





Superflow & Superflow 350 Adjustments



- Bending the Lever should only be done after all other adjustments have been made
- It is rare that a Lever should have to be bent
- Usually Levers only require bending because of damage inflicted during adjustment by persons not knowledgeable in proper adjustment procedures



Superflow & Superflow 350 Adjustments



- After adjustments are completed
- 1/16" to 1/8" free play in lever
- BENDING THE LEVER DOWN IS REQUIRED

If Lever Too High



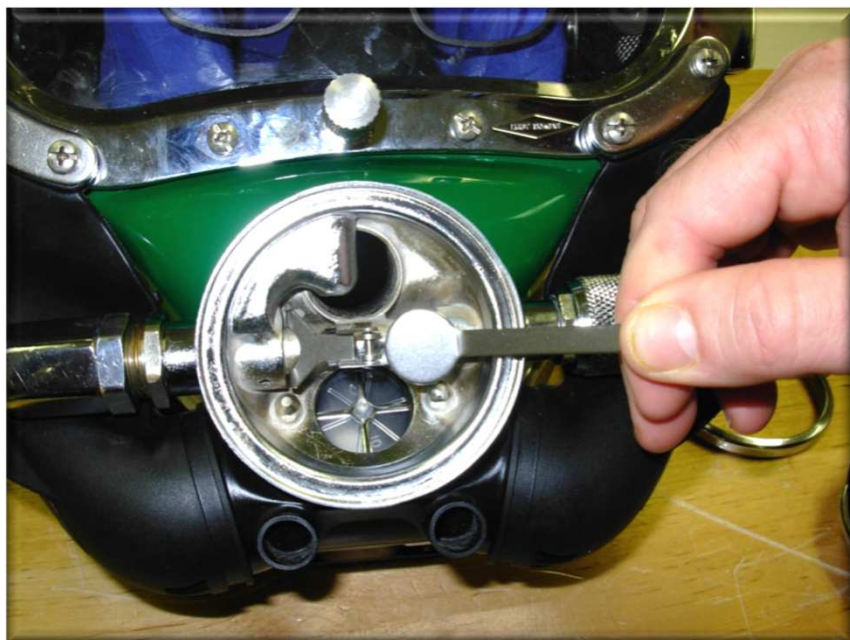
WRONG!



Superflow & Superflow 350 Adjustments



Spoon end of wrench is used
to bend lever down



Spoon is in position





Superflow & Superflow 350 Adjustments



- Lever can only be bent down while lever is installed in regulator
- Bend lever in small increments





Superflow & Superflow 350 Adjustments



- Adjustments are complete
- 1/16" to 1/8" free play in lever
- BENDING THE LEVER UP IS REQUIRED

If lever is Too Low



WRONG!



Superflow & Superflow 350 Adjustments



Bending the Lever Up

- Lever has to be removed from regulator in order to bend it up
- Bending the lever up while in the regulator will deform the lever



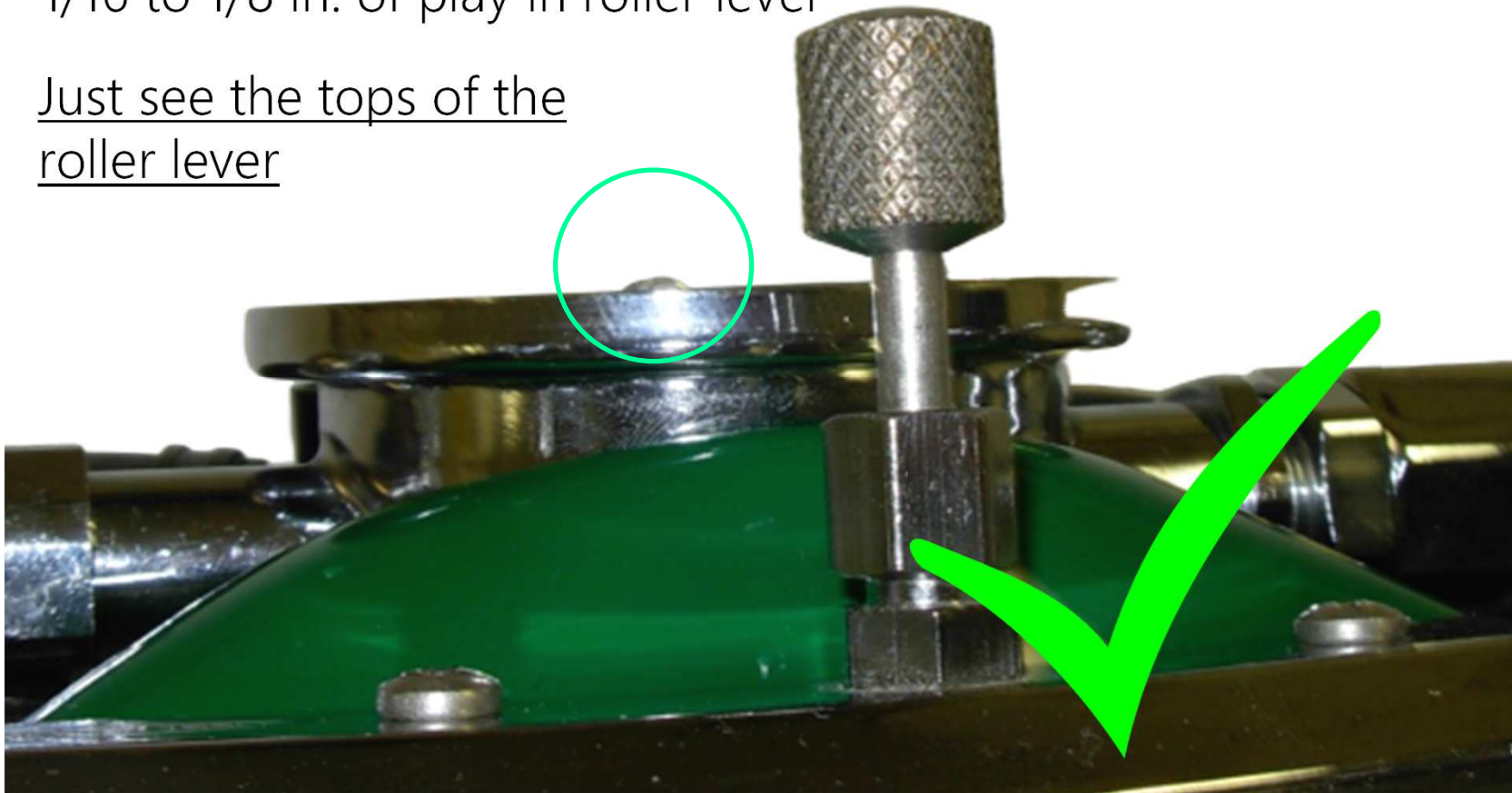


Superflow & Superflow 350 Adjustments



Correct Height

- 1/16 to 1/8 in. of play in roller lever
- Just see the tops of the roller lever





Superflow & Superflow 350 Adjustments



- When inspection and or adjustments are complete, install diaphragm, cover, and clamp

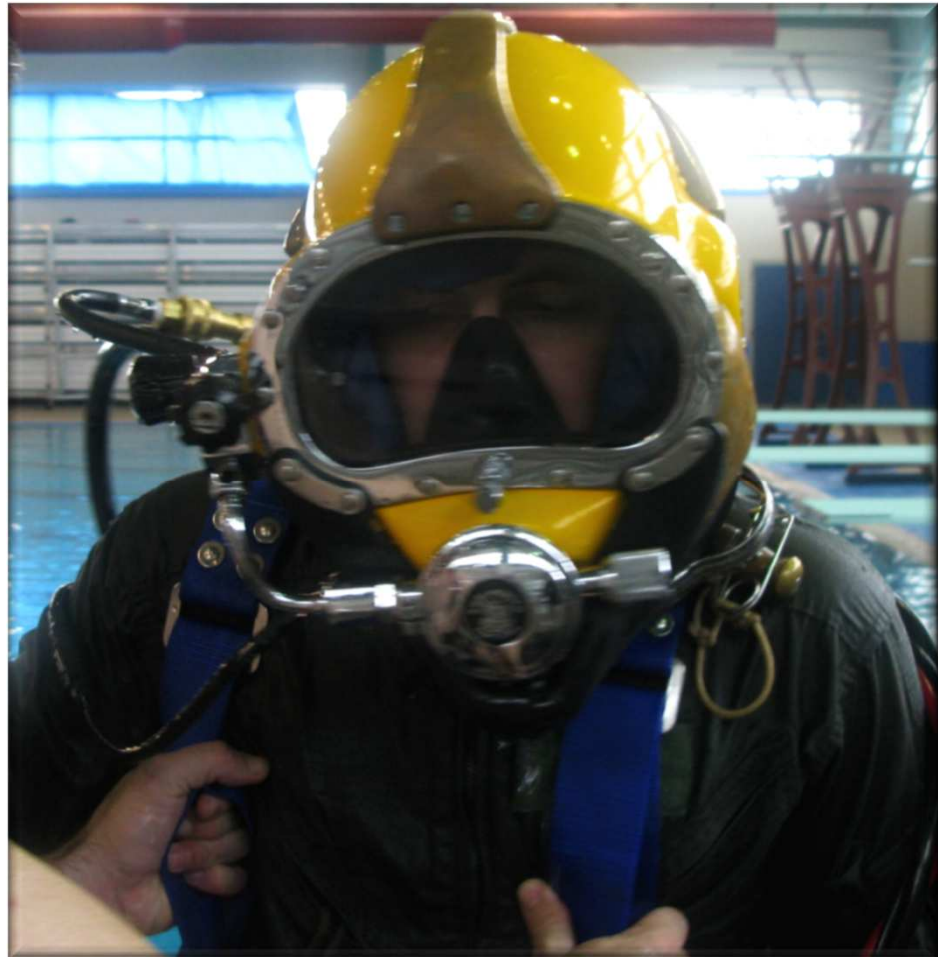




Superflow & Superflow 350 Adjustments



- Regulator is adjusted and ready for use



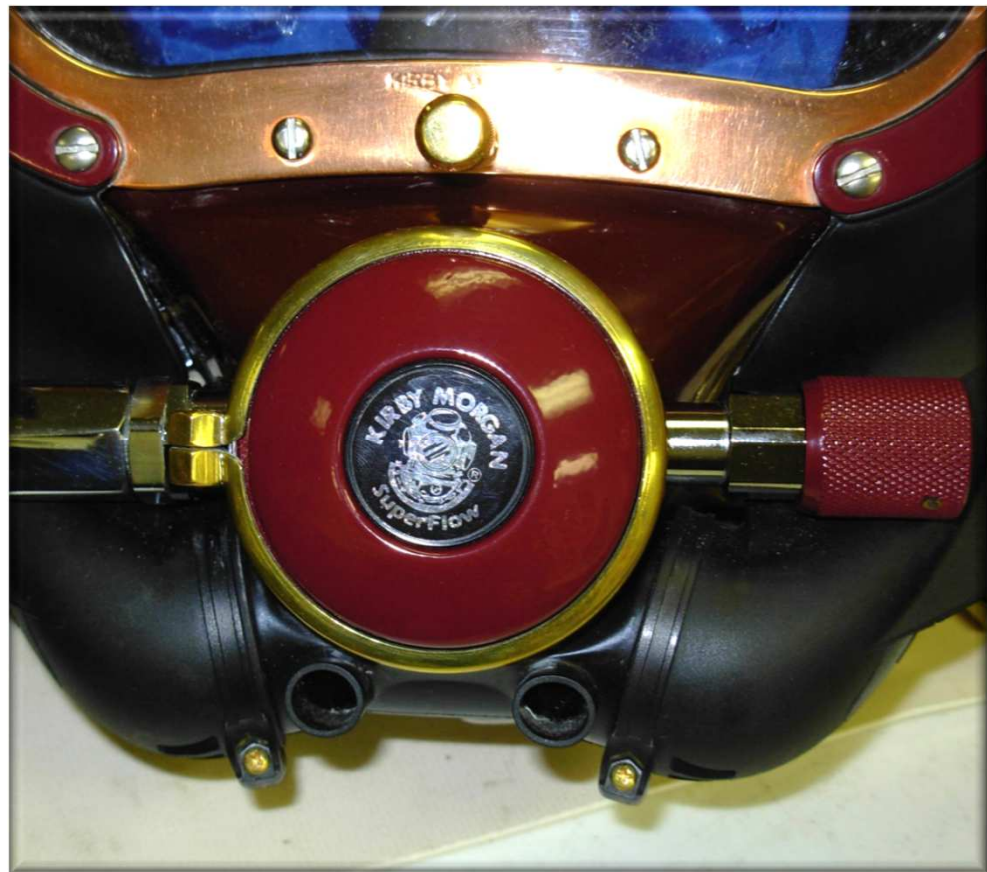


Summary



Always refer to Operations & Maintenance manual for adjustment procedures

- 2 different models
- Inspection
- Adjustments





Questions

